

## Research Update

# Linking Physical Activity, Physical Education and Academic Achievement

Recent national, cumulative evidence shows a clear link between physical activity and academic performance. The CDC's *The Association Between School-Based Physical Activity, Including Physical Education, and Academic Performance* examines 23 years of research on the links between school-based physical activity, including physical education, and academic success. The majority of the studies report that physical activity was positively related to academic performance, including academic achievement (grades, standardized test scores); academic behavior (on-task behavior, attendance); and factors that can positively influence academic achievement (concentration, attention, improved classroom behavior). Most importantly, adding time during the school day for physical activity does not appear to take away from academic performance. Given these findings, the report recommends that schools increase the amount of time spent in physical education and/or increase the quality of their physical education program, provide recess and physical activity breaks in the classroom, promote walk/bike to school programs, and offer non-competitive intramural and interscholastic sports.

Additionally, Charles E. Bausch, a professor of health education at Columbia University's Teachers College, reviewed research from more than 300 sources to write *Healthier Students are Better Learners: A Missing Link in School Reform to Close the Achievement Gap*. Bausch identifies seven key health disparities that impact student learning, including that two in three students don't get enough physical activity. He cites strong evidence that indicates physical activity affects the brain and cognition, thus favorably affecting the ability to learn and educational outcomes. He also notes that a variety of strategies have been tried to help close the achievement gap -- such as No Child Left Behind and more rigorous teacher certification -- but that these seven health risks are disproportionately impairing academic performance of disadvantaged urban students and need to be addressed in schools.

To see both reports, please visit: [www.cdc.gov/healthyyouth/health\\_and\\_academics/index.htm#3](http://www.cdc.gov/healthyyouth/health_and_academics/index.htm#3)  
[www.equitycampaign.org/i/a/document/12557\\_EquityMattersVol6\\_Web03082010.pdf](http://www.equitycampaign.org/i/a/document/12557_EquityMattersVol6_Web03082010.pdf)

## Are you on the list?

Every week, our program sends out a variety of school health-related resources and information such as new health research, professional development offerings and grant opportunities. If you are not on our listserv, please email [CMilligan@doe.mass.edu](mailto:CMilligan@doe.mass.edu) and ask to be added.



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## Newsletter Fall 2010

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Hello and welcome to the fall edition of the Coordinated School Health (CSH) newsletter! In each issue of our seasonal newsletters, we focus on one topic relating to school health concerns—including the latest research, success stories and action steps for schools. This issue highlights physical education and physical activity in schools. In 2009, 66% of high school students and 67% of middle school students did not meet the recommended levels of physical activity (60 minutes per day)<sup>1</sup> on at least 5 days per week.<sup>2</sup> Additionally, in 2009 only 18% of Massachusetts high school students participated in daily physical education.<sup>1</sup> The Institute of Medicine (IOM) recommends that all students participate in a minimum of 30 minutes of moderate to vigorous physical activity during the school day. Schools need to help address this issue by providing high-quality physical education and physical activity programs. We hope this newsletter inspires you to work toward this goal.

If you have any questions about our program or need assistance implementing Coordinated School Health or Wellness Policies, please contact us.

Thanks, and have a healthy day!

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<sup>1</sup> 2009 MA Youth Risk Behavior Survey  
and MA Youth Health Survey

<sup>2</sup> In the week before the survey.

A partnership of  
the Massachusetts  
Department of  
Elementary and  
Secondary Education  
and the Massachusetts  
Department of Public  
Health.





## Coordinated School Health (CSH)

CSH is a joint initiative between the Massachusetts Departments of Elementary and Secondary Education and Public Health funded by the Centers for Disease Control and Prevention's Division of Adolescent and School Health (CDC/DASH). Our team's



primary goal is to improve school policies, environment and instruction relating to physical activity, nutrition and tobacco. Research shows that improvement in these areas not only contributes to the healthy development of students but to their academic success as well.

In order to accomplish these goals, we promote the Coordinated School Health model as an approach where all school health-related activities are integrated within the school and community in

an effort to enhance the health and academic outcomes of students. This model provides a framework for creating linkages between nine existing components:

**Health Education • Physical Education • Health Services  
Food and Nutrition Services • Counseling, Psychological and  
Social Services • Safe and Healthful School Environment  
• Health Promotion for Staff • Family/Community  
Involvement • Family and Consumer Sciences Education**

CSH staff provide training, technical assistance, and resources to schools to promote the healthy development of Massachusetts youth. Additionally, CSH collects the biannual School Health Profiles surveys on health-related programs in Massachusetts middle and high schools and works to increase coordination among state-level agencies and organizations working in school health. To learn more about CSH, please visit [www.cdc.gov/HealthyYouth/CSHP](http://www.cdc.gov/HealthyYouth/CSHP).

## Upcoming Trainings, Conferences and Events

### October 4-29, 2010

CSH will be subsidizing enrollment for teachers in the John C. Stalker Institute of Food and Nutrition at Framingham State College's online nutrition courses.

### October 6, 2010: *Walk to School Day*

Communities can choose to celebrate for a day, a week or the entire month as part of International Walk to School Month. For more information, please visit: [www.commute.com/saferoutes](http://www.commute.com/saferoutes).

### November 15 & 16, 2010

MAHPERD's 81st annual convention will be held at the DCU Center in Worcester.

## Physical Education

## Guidelines and Best Practices

A comprehensive physical educational program over several years can help students acquire the skills to maintain lifelong active lifestyles. In addition, the Centers for Disease Control and Prevention report illustrating the link between physical activity, physical education and academic achievement (see Research Update) provides compelling support for ensuring that students receive regular physical education as part of their academic learning.



The Massachusetts Comprehensive Health Curriculum Framework is a document outlining health content, including physical health, to be covered by the end of grades 5, 8 and 12 in Massachusetts schools. The framework promotes habits and conduct that enhance health and wellness, and guides efforts in building healthy families, relationships, schools and communities. The National Association for Sport and Physical Education (NASPE), the leading authority on quality physical education, has published national guidelines recommending that every student in every grade have the opportunity to participate in quality physical education. The NASPE components of a high-quality Physical Education Program include opportunities to learn, meaningful content, appropriate instruction, and stu-

dent and program assessment. Quality physical education programs help all students develop health-related fitness, physical competence, cognitive understanding and positive attitudes about physical activity so they can adopt healthy and physically active lifestyles. To get more information about the key points, tools, and resources available for assessing and implementing a high-quality physical education program visit, [www.aahperd.org/NASPE](http://www.aahperd.org/NASPE).

Standards-based curriculum can be assessed by using The Physical Education Curriculum Analysis Tool (PECAT), a tool for helping school districts conduct a clear, complete and consistent analysis of written physical education curricula. The PECAT is customizable to include the Massachusetts Comprehensive Health Curriculum Framework standards. The results from the analysis can help school districts enhance existing curricula, develop their own curricula, or select a published curriculum for the delivery of quality physical education in schools. The PECAT can be downloaded or ordered at [www.cdc.gov/HealthyYouth/PECAT](http://www.cdc.gov/HealthyYouth/PECAT).

Finally, the Coordinated School Health Program at ESE and DPH has begun work with a broad-based, statewide coalition of school physical education/physical activity stakeholders to review the status of physical education and other school activity programs and to consolidate a set of best practice guidelines for Massachusetts schools. In line with First Lady Michelle Obama's "Let's Move" initiative ([www.letsmove.gov](http://www.letsmove.gov)), Massachusetts and other states are exploring ways to ensure that school-age youth are physically active now and have the skills and motivation for a lifetime of physical activity.

# Massachusetts Success Stories: Physical Education & Physical Activity

## Staying in Shape in Chelsea, Revere and Charlestown, MA

The Stay in Shape Program, managed by MGH Community Health Associates (CHA), delivers after-school programming to adolescent girls, who are in pressing need of healthy lifestyle education. This program grew its operation from a single school in 2000 to a total of five schools in 2009, including Chelsea High School and Clark Avenue Middle School, Chelsea; Revere High School and Rumney Marsh Academy Middle School, Revere; and the Warren-Prescott Elementary School, Charlestown.

The overall goal of the Stay in Shape Program is to assist participants in establishing lifelong, positive health behaviors through understanding and participating in daily physical activity, healthy eating and stress management. To reach this goal, the program delivers a program that addresses the following six objectives:

- 1. Eat 5-9 servings of fruit and vegetables every day;**
- 2. Eat breakfast every day;**
- 3. Read food labels and make smarter food choices;**
- 4. Reduce TV/screen time for entertainment to no more than 2 hours a day;**
- 5. Be physically active for at least 60 minutes a day; and**
- 6. Engage in deep breathing activities in order to control stress**

The program is offered each school semester to 20 girls in grades 5-12, and runs for six to 10 weeks with one to two sessions per week. Each session lasts for 90 minutes, and includes 30 minutes of education on a carefully selected topic and 60 minutes of physical activity. Selected exercise terms such as heart rate, strength, endurance and balance are introduced to all participants to help them understand different types of exercise as well as the unique

benefits each type brings to the body. The program also encourages participants to “think like an athlete” and stay motivated in reaching their daily activity goal. Creative ways to build exercise into daily routines are emphasized so each participant learns that finding time for exercise is easy. Some examples of Stay in Shape’s fitness activities include:

- Climb the stairs to reach the top of their favorite mountains**
- Kick the hacky sack to train agility and flexibility**
- Use a Chinese jump rope to stretch and balance the whole body**
- Dance Zumba to tone and firm the body**
- Use the school weight training center for a fun exploration of workout equipment**

Over the past 10 years, the Stay in Shape Program has served more than 700 girls and produced many positive changes among participants. The combined rate of increased knowledge in health, nutrition and confidence and improved healthy behaviors ranges from 20%-80% at the end of the program. In the coming school year, MGH CHA plans to continue the Stay in Shape operation at its current schools while expanding the program to two more schools, the Harvard-Kent School in Charlestown and Eugene-Wright School in Chelsea. For more information about Stay in Shape, please contact Ming Sun at 781-485-6400 or [stayinshape@partners.org](mailto:stayinshape@partners.org).



## New Assessment Illustrates Importance of Physical Education in Danvers, MA

The physical education program at Danvers High School has recently implemented a new strategy for assessing students’ performances as they move towards meeting state and national physical education standards.

The new assessment model offers students clear-cut expectations to allow for success in attaining a defined learning objective.

Previously, physical education students at Danvers High School were graded on their effort, attendance, participation and attire. The criteria were generally very subjective, and projected an unintended message to students that their attire was more relevant than their actual performance in class.

By aligning the National Association for Sport and Physical Education (NASPE) standards with Bloom’s Taxonomy of Learning Domains, students were assessed by their peers, themselves and through teacher analysis to provide relevant feedback. Teacher-designed performance rubrics were the standard used in the varied assessment strategies.

Student performance on the Fitnessgram also played an integral role in the new assessment process. Students participated in a pre- and post-test process with SMART goal-setting strategies employed to develop a short- and long-term plan to improve their health-related fitness. Self-assessment strategies were key in tracking progress and providing feedback to each student.

In an informal survey, staff and students all agreed that this new assessment process provided a new perspective on the importance and relevance of physical education in a student’s academic experience.

## Safe Routes in Wakefield, MA

In September 2008, Sherri Carlson, mother of a Dolbeare Elementary School (Wakefield) student, decided to start a Walking School

Bus program to encourage exercise, save gas, and reduce traffic and congestion. The “bus,” a group of students walking together with an adult escort, starts at the Carlson house about a half-mile from the school and makes two stops along the way. Parents are welcome to join the bus or drop their children off at one of the stops along the way. The two leaders escort the students safely to school; the entire walk takes about 15 minutes.

To get the program started, Carlson met with a representative from MassRIDES, the principal of the school, and the town council. Parents who volunteer as leaders must undergo a CORI check, and parents who drop off their children to take the bus must sign a permission slip and agree to ground rules:

- Parents must hand off the child to a leader**
- Parents should use common sense for weather issues and not call leaders**
- Parents must drop their children off on time; the bus waits only about two minutes at each stop**

Every school day, except in the winter, 10-20 children join the walking school bus to Dolbeare Elementary. On the way, the students, parents, and volunteers make friends and get exercise. For some children, the exercise helps them focus better in school. In addition to the formal program, now there are several informal groups — kids who ride their bikes to school and even a group of students who walk behind the bus. Another result of this program’s success is that now the other three elementary schools in Wakefield have partnered with MassRIDES to develop their own walking school buses.

For more information on the Massachusetts Safe Routes to School program or to find out how your school can become involved, please contact Ben Hammer at 617-892-6089 or [ben.hammer@state.ma.us](mailto:ben.hammer@state.ma.us).